BIRYULIN, I., arkhitektor; KONDUKHOV, A., arkhitektor; KOROBOV, S., agronom; DROZDOV, A., inzh.

Agricultural planning in Yaroslavl Province. Sel'. stroi. 16 no.1:15 Ja '62. (MIRA 16:1)
(Yaroslavl Province--Regional planning)

KONDUKOV, I.

24138 KONDUKOV, I. Golubye polya. (Oznatnoy l'novodke, zven'evoy K. Mayorovoy. Kolkhoz "Krasnyy putilovets", Kashin. rayon. Ocherk). Rodnoy Kray (Kalinin), No. 3, 1948 (NA CBL: 1949), S. 73-88.

SO: Letopis, No. 32, 1949.

KONDUKOV, N. B.

"Separation of Multicomponent Mixtures by the Method of Semicontinuous Rectification." Sub 28 Jun 51, Moscow Inst of Chemical Machine Building.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

USSR/Engineering - fuels FD-1386

Card 1/1 : Pub. 41-13/18

Author : Karavayev, N. M., Corresponding Member, Academy of Sciences, USSR; Zykov, D. D., and Kondukov, N. B.

Title : Unused possibilities of periodic rectification of complex mixtures

Periodical : Izv. AN SSSR. Otd. tekh. nauk 3, 123-129, Mar 1954

Abstract : Presents the principles of method of rectification with introduction of intermediate fractions which intensifies the periodic process of rectification. Shows a method for practical use of the process in the distillation of coal-tar fraction for obtaining naphthalene. Tables, diagrams. Two references.

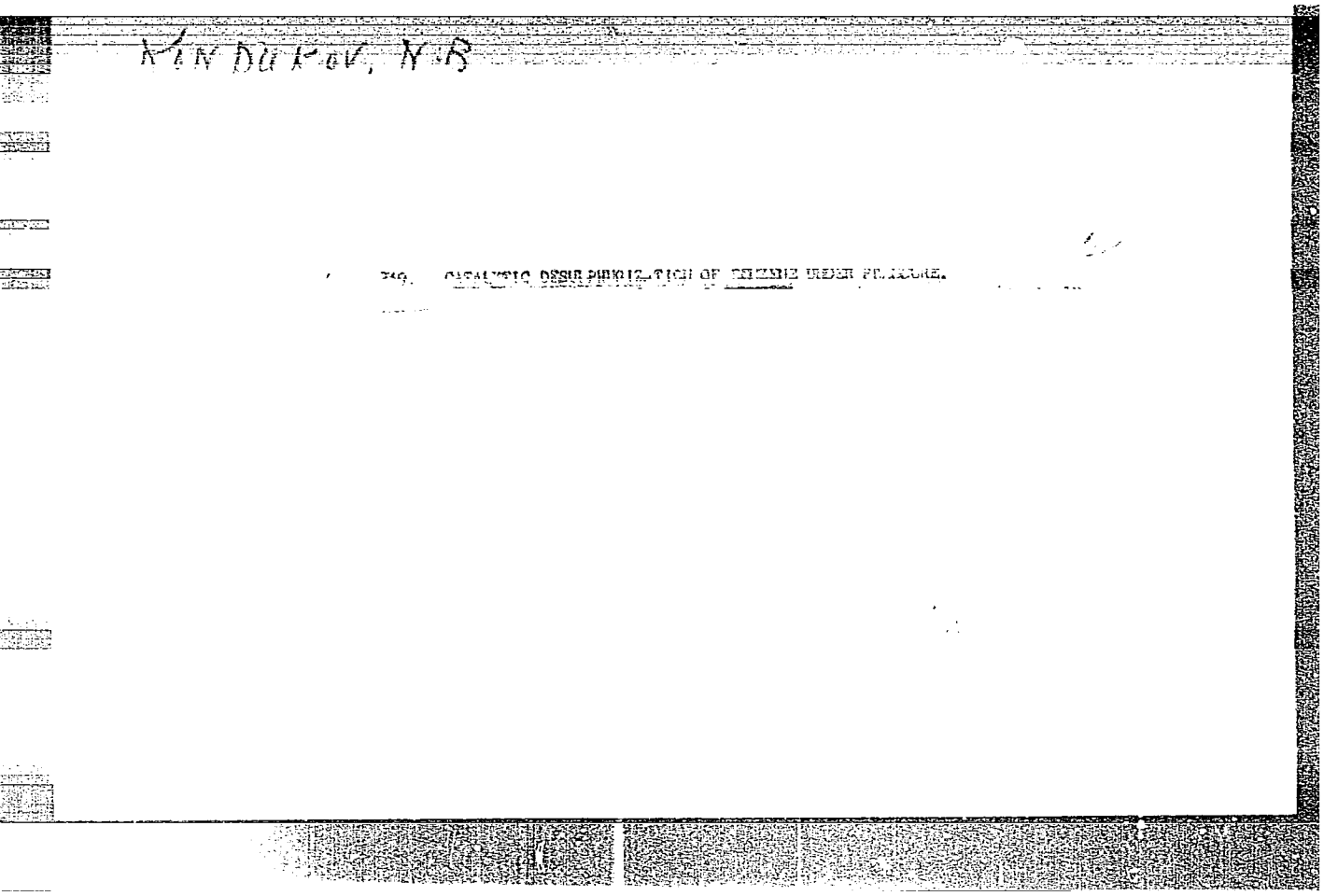
Institution :

Submitted : January 11, 1954

KARAVAYEV, N.M.; ZYKOV, D.D.; KONDUKOV, N.B.

Single stages evaporator designed for the study of high-boiling point mixtures. Zav.lab. 21 no.2:245-246 '55 (MLRA 8:6)

1. Moskovskiy institut khimicheskogo mashinostroyeniya
(Boiling points) (Evaporating appliances)



Kondukov, N. B.

Category: USSR / Physical Chemistry
Thermodynamics. Thermochemistry. Equilibrium. Physico-chemical analysis. Phase transitions. B-8

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29925

Author : Kondukov N. B.
Inst : not given
Title : Nomograph for Calculation of Samples in Determination of Molecular Weight by the Cryoscopic Method.

Orig Pub: Zh analit. khimii, 1956, 11, No 4, 480-482

Abstract: For a rapid calculation of the sample of substance, in the cryoscopic method of molecular weight determination, a nomograph is proposed, that is convenient in carrying out a large number of analyses and in repeated experiments with the same amount of solvent. An example of the use of the nomograph is given.

Card : 1/1 -42-

Moscow Inst. Chem Machine Building

KONDUKOV, N. B.

68-1-8/21

AUTHOR: Kondukov, N. B., Candidate of Technical Sciences

TITLE: On Hydraulic Calculations of Coke Oven Gas Mains. (K gidravlicheskomu raschetu gazoprovodov koksovogo gaza)

PERIODICAL: Koks i Khimiya, 1957, No.1, pp. 30 - 32 (USSR)

ABSTRACT: Various formulae proposed for the calculation of hydraulic resistance and the diameter of gas mains are discussed. Two formulae are proposed: eq. (5) for smooth tubes and eq. (6) for the transitionary conditions, in which the dependence of the friction coefficient on the mode of flow is taken into consideration. A comparison of hydraulic resistance of gas mains calculated from Pole's [ref.1], Levin's [Ref.6] and the author's formulae is given in the table. It is stated that for approximate calculations Pole's formula can be used, but for checking the resistance of the whole coke oven gas mains system, the author's formula should be used.
There are 1 figure, 1 table and 10 references, 8 of which are Slavic.

ASSOCIATION: Moscow Institute of Chemical Machine-building. (Moskovskiy Institut Khimicheskogo Mashinostroyeniya)

AVAILABLE: Library of Congress

Card 1/1

KONDUKOV, N. B.

68-12-13/25

SOV/68-59-1-13/26

AUTHOR: Kondukov, N.B., Candidate of Technical Sciences

TITLE: The Use of Equilibrium Curve of Liquid - Vapor Systems for Designing Rectification Equipment for Multi-component Mixtures (Primeneniye krivykh ravnovesiya sistemy zhidkost' - par dlya rascheta mnogokomponentnykh smesey)

PERIODICAL: Koks i Khimiya, 1959, Nr 1, pp 44 - 48 (USSR)

ABSTRACT: In order to calculate the rectification process when it is required to separate a single component from a multi-component mixture, an equilibrium curve for the system liquid-vapour can be constructed considering the mixture as a binary one, consisting of the required component and the remaining mixture as a second component. On an example of naphthalene fraction the method of utilisation of such an equilibrium curve of pseudo-binary mixture for the calculation of the rectification process is demonstrated. There are 4 figures, 1 table and 7 references, 5 of which are Soviet and 2 English.

ASSOCIATION: MIKhM

Card 1/1

Sov/68-59-10-16/24

AUTHORS: Kondukov, N.B., Dubrovskaya, D.P., Forer, Ye.A., and Kasharskaya, M.F.

TITLE: Vapour Phase Purification of Benzole from Sulphurous Compounds in a Stream of Coke Oven Gas with a Fluidised Bed Purifying Agent

PERIODICAL: Koks i khimiya, 1959, Nr 10, pp 49-50 (USSR)

ABSTRACT: Purification of benzole from sulphurous compounds by passing it through a fluidised bed of a preliminary activated Krivoy Rog ore in a stream of coke oven gas at a temperature of 400-500°C, was investigated on a laboratory scale apparatus (fig). The activation of the ore consisted of a treatment with sodium hydroxide and subsequent reduction to Fe and FeO in a stream of coke oven gas. The consumption of sodium hydroxide amounted to 7% of the weight of the ore. The results obtained are given in the table. For comparison, purification of benzole in a stream of pure hydrogen was also carried out (results are given in the table). It was found that purification of benzole from carbon disulphide takes place easily, while for the removal of

Card 1/2

Vapour Phase Purification of Benzole from Sulphurous Compounds in a Stream of Coke Oven Gas with a Fluidised Bed Purifying Agent

thiophene a longer contact time with the purifying mass is necessary. The required degree of purity of benzole for synthetic purposes could be obtained in the laboratory apparatus by repeated passage through the fluidised bed until a total contact time of 6.4 sec, is obtained. There was no material difference between the degree of purification of benzole in a stream of pure nitrogen or coke oven gas. Purifying properties of the contact mass can be regenerated by oxidation in a stream of air and steam at a temperature of 500-600°C and subsequent reduction in a stream of coke oven gas. There is 1 figure and 1 table.

ASSOCIATIONS: MIKhM (N. B. Kondukov)
Makeyevskiy koksokhimicheskiy zavod
(Makeyevka Coking Works)

KONDUKOV, N.B., kand.tekhn.nauk

Rectification as a method for processing coking products. Zhur. VKHO 5 no.1:68-71 '60. (MIRA 14:4)
(Coke industry—By-products)
(Distillation, Fractional)

KIRPIKOV, V.A., kand. tekhn. nauk; KONDUKOV, N.B., kand. tekhn. nauk;
GUKHMAN, A.A., doktor fiziko-matem. nauk, prof., red.

[Fundamentals of the thermodynamics of flows] Osnovy termodinamiki potoka; uchebnoe posobie. Pod red. A.A.Gukhmana. Moskva, Mosk. in-t khim. mashinostroeniia, 1961. 119 p. (MIRA 14:11)
(Thermodynamics) (Fluid dynamics)

KONDUKOV, N.B., kand.tekhn.nauk

Principles of the design of apparatus for removing sulfur from organic products in a fluidized bed of washes. Khim. mash. no. 1:10-12 Ja-F '61. (MIRA 14:1)
(Organic compounds) (Sulfur compounds)
(Chemical apparatus)

KONDAKOV, N.B.

Similarity conditions and hydrodynamic features of a transient state of pseudoliquefaction [with summary in English]. Inzh.-fiz. zhur. 4 no.3:31-38 Mr '61. (MIRA 14:8)

1. Institut khimicheskogo mashinostroyeniya, g. Moskva.
(Fluidization)

KONDUKOV, N.B.

Hydrodynamic resistance in the transition zone of pseudoliquefaction of a polydisperse layer. Inzh.-fiz.zhur. 5 no.3:27-32 Mr '62. (MIRA 15:3)

1. Institut khimicheskogo mashinostroyeniya, Moskva.
(Hydrodynamics)(Floating bodies)

KONDUKOV, N.B.; LINDIN, V.M.

Calculating the coefficient of hydrodynamic resistance and fluidization rate of a polydisperse layer of spherical particles. Khim.prom. no.11:793-795 N '62. (MIRA 16:2)
(Fluidization) (Hydrodynamics)

KONDUKOV, N.B.; KORNILAYEV, A.N.; SKACHKO, I.M.; AKHROMENKOV, A.A.; KRUGLOV, A.S.

Studying the parameters of the motion of particles in a pseudo-fluidized bed by the radioisotope method. Inzh.-fiz. zhur. 6 no.7: 13-18 Jl '63. (MIRA 16:9)

1. Institut khimicheskogo mashinostroyeniya, Moskva i Institut neftyanoy promyshlennosti, Moskva.
(Fluidization) (Radioactive tracers)

KONDUKOV, N.B.

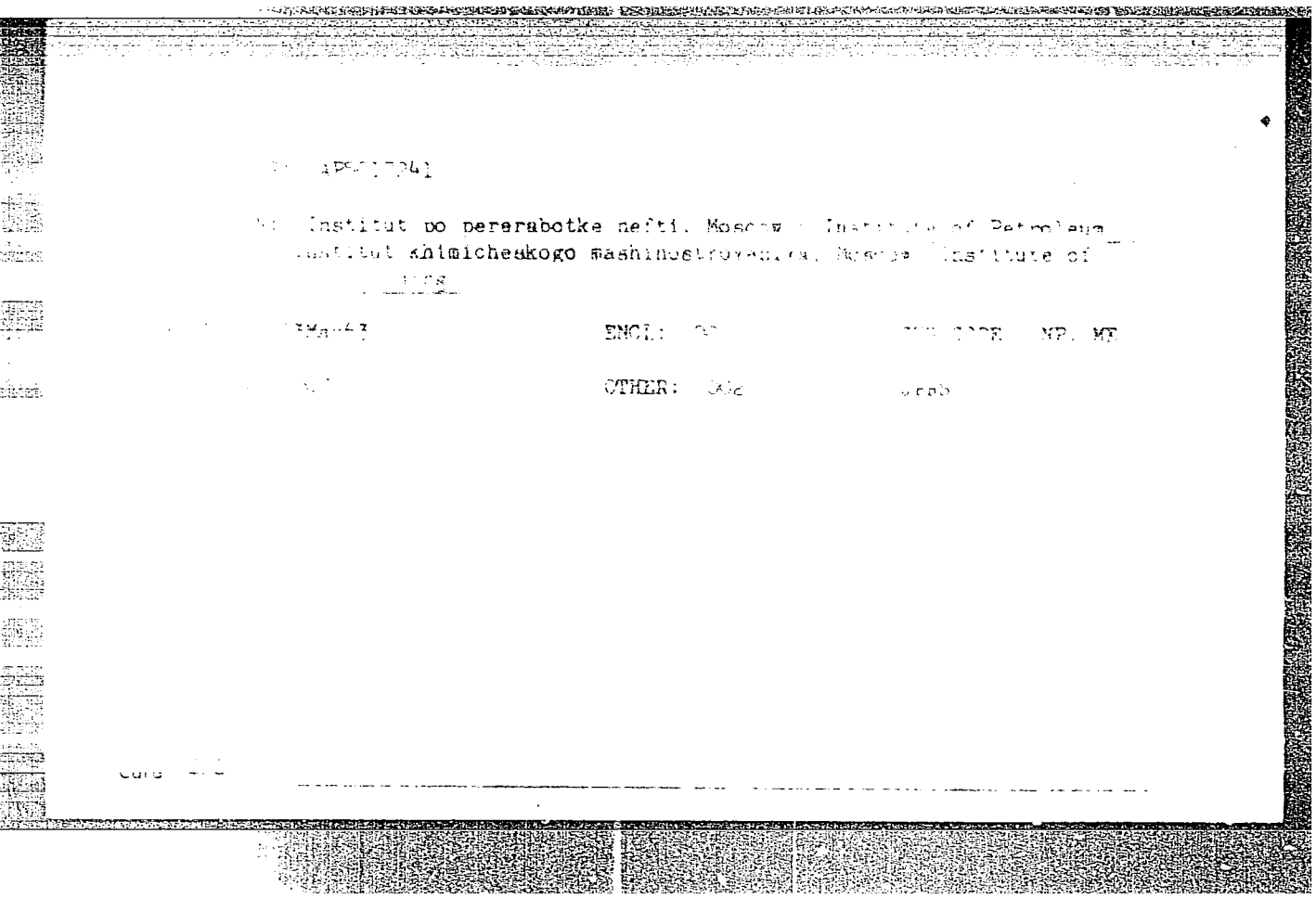
External hydrodynamics problem in the calculation of the coefficient of resistance and critical speed of the fluidization of a polydispersed bed. Khim.prom. no.11:810-813 '63. (MIRA 17:4)

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 7, 1964, 25-32

TOPIC TAGS: particle motion, fluid mechanics, chemical labelling, radioisotope

ABSTRACT: This paper presents an analysis of the results of an experiment described in an earlier paper by the authors (Inzhenerno-fizicheskiy zhurnal, No. 7, [illegible] are given showing the paths of the particles in the vertical and [illegible] motion in a mono-dispersion fluid[illegible] components [illegible]ess in the bed are obtained. A discussion is given of the errors in [illegible] Orig. art. has: 6 graphs.

Card 1/2



Institut po pererabotke nefti. Moscow ... Institute of Petroleum ...
...institut khimicheskogo mashinostroyeniya, Moscow ... Institute of ...

ENCL: ... OTHER: ...

AKOPYAN, L.A.; VARYGIN, N.N.; GUTAREV, V.V.; ZYKOV, D.D.; KARAVAYEV, N.M.; KONDUKOV, N.B.; LASTOVTSEV, A.M.; MAKAROV, Yu.I.; MAZUROV, D.Ya.; MARTYUSHIN, I.G.; MASLOVSKIY, M.F.; NIKOLAYEV, P.I.; PLANOVSKIY, A.N.; RYCHKOV, A.I. [deceased]; CHEKHOV, O.S.; KHVAL'NOV, A.M.; SHAKHOVA, N.A.

Theory and practice of heterogeneous processes in a fluidized bed. Trudy MIKHM 26:3-22 '64. (MIRA 18:5)

KONDUKHOV, N.B.; SOSNA, M.Kh.

Theory of the equilibrium of binary systems as applied to the fluidized bed and the initial rate of the transition zone. Khim.prom 41 no.6:402-406 Je '65. (MIRA 18:8)

KUL'TIN, Ye.I.; KONDUKOV, V.P.; SHCHEGLOVA, M.A.

Wet method of charge preparation for pelletizing. Obog. rud. 5 no.1:26-28 '60. (MIRA 14:8)
(Ore dressing)

KONDUKOV, V.P.

Improving the design of belt-driven vacuum filters. Obog.rud 5 no.2:52-54 '60. (MIRA 14:8)
(Filters and filtration) (Ore dressing)

KONDUKOV, V.P.

Filters for fine iron concentrates. Obog. rud no.6:49-53 '61.
(MIRA 15:3)

(Ore dressing) (Filters and filtration)

KOMDUKOV, V. P.

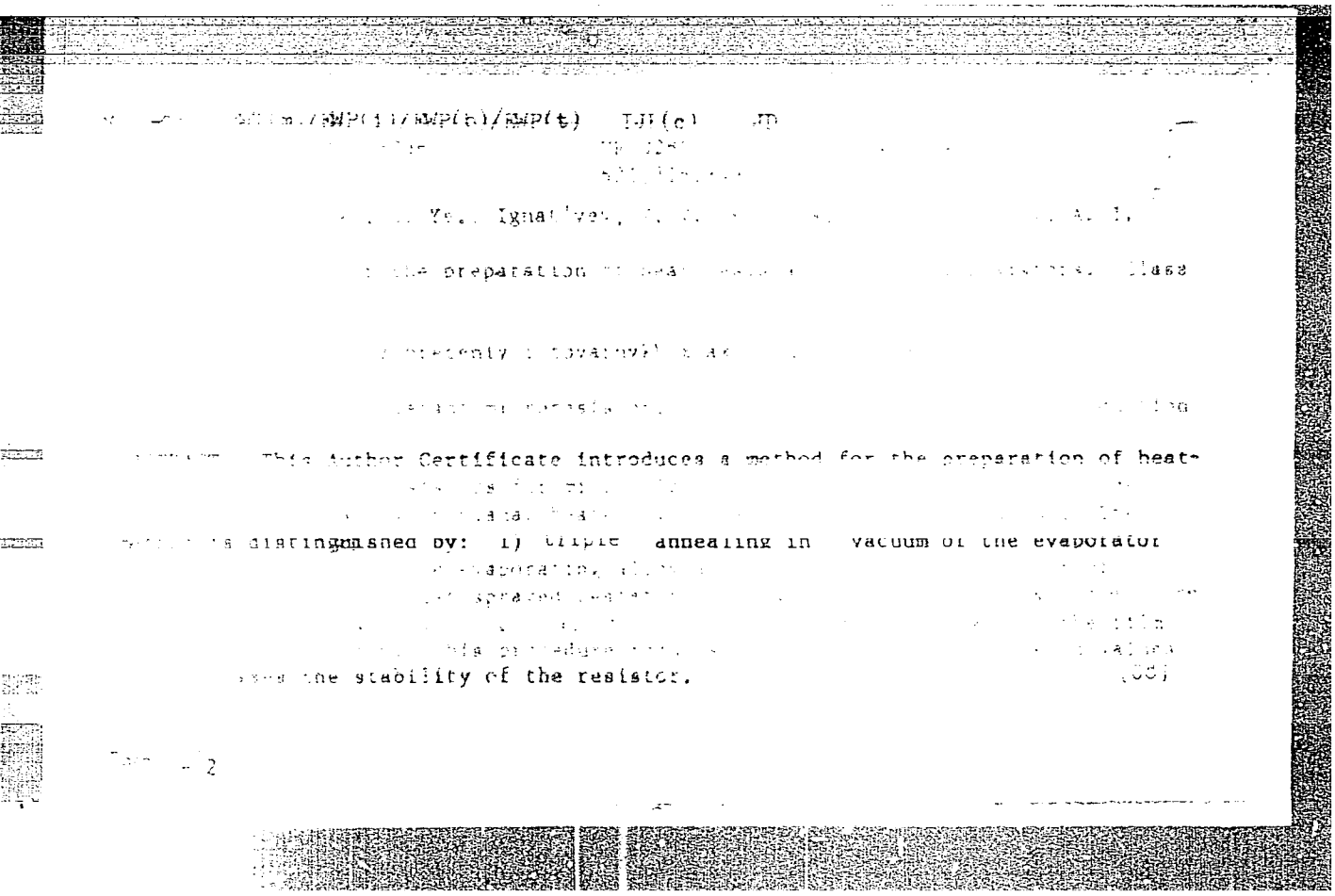
Determining the size of industrial thickeners by the result of industrial tests. Obog. rud. 7 no.6:19-25 '62. (MIRA 16:4)

(Ore dressing—Equipment and supplies)

KONDUKOV, V.P.

Reply to E.S.Men'shchikov's article "Role of mixed reagents in the process of dewatering iron concentrates." Gor.zhur. no.8:74-75 Ag '62. (MIRA 15:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut mekhanicheskoy obrabotki poleznykh iskopayemykh, Leningrad.
(Ore dressing--Equipment and supplies)



ASSOCIATION: Gosudarstvennyy komitet po elektronnoy tekhnike SSSR (State Committee for Electronic Technology of the SSSR)

OTHER: 000 ATD PRESS: 4055

KONDYUKOVA, P.D., red.; KHAR'KOV, S.F., tekhn. red.

[Put the resources of the land in the service of our country] Bogatstva zemli - na sluzhbu Rodine; materialy. Moskva, Izd-vo "Sovetskaia Rossiia," 1962. 205 p. (MIRA 15:2)

1. Soveshchaniye rabotnikov sel'skogo khozyaystva Sibiri, Novosibirsk, 1961.
(Siberia--Agriculture)

KONDUKTOROVA, T. S.

Craniology

Skull of neolithic man found in the region near Moscow. Biul. Kom. chetv. per. No. 16, 1951.

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

KOLDUKTOROVA, T.S.

Morphological features of the cranium from the Severka River.
Uch.zap.Mosk.un. no.158:217-237 '52. (MLRA 8:8)
(Dnepropetrovsk Region--Graniology)

KONDUKTOROVA,T.S.

Morphological features of the cranium from the Severka River.
Uch.zap.Mosk.un. no.158:239-252 '52. (MLRA 8:8)
(Severka Valley--Graniology)

KONDUKTOROVA, T. S.

"Iameneniya fizicheskogo tipa naseleniya Ukrainy ot mezolita do srednikh vekov."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences, Moscow, 3-10 Aug 64.

This Author's Certificate introduces a method for fastening a winding
wire to a current
fastening process is

none

KONDURAKI, Emil', akademik

Revival of the past. Nauka i zhizn' 27 no.9:65-66 S '60.
(MIRA 13:9)

1. Direktor Instituta arkhelogii AN Rumynskoy Narodnoy Respubliki.
(Rumania--Excavations (Archaeology))

S/033/62/039/003/008/010
E032/E114

3,2200

AUTHOR: Kondurar', V.T.

TITLE: Perturbations of the rotational-translational motion of a satellite and planet due to their oblateness

PERIODICAL: Astronomicheskiy zhurnal, v.39, no.3, 1962, 516-526

TEXT: Classical theories of the motion of satellite-planet systems have been developed on the assumption that the motion of the centres of mass of the satellite and planet is independent of perturbations in their rotational motion, although this fundamental assumption has not been explicitly verified. In view of this there has not been a single theory covering both the rotational and translational motion of a planet-satellite system. Instead, there are three separate theories covering the rotation of the planet, the rotation of the satellite and the motion of their centres of mass. The aim of this work was to set up simple approximate formulae for perturbations in the precession, nutation and libration angles of the satellite, perturbations in the precession and nutation angles of the planet, and for perturbations in the radius vector, applicate and longitude of

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the satellite's centre of mass. The first paper of this programme (Astron. zh., v.38, 1961, 310) was concerned with perturbations in the translational-rotational motion of a spheroidal satellite due to its oblateness. In those calculations the planet was assumed to be a sphere with a spherically symmetric density distribution. In the present paper the oblateness of the central body is also taken into account and its effect on the translational-rotational motion of the satellite and the rotational motion of the planet itself are discussed on the assumption that the planet and the satellite exhibit a dynamical symmetry relative to their rotational axes. The dynamic "flattening" of the planet is assumed to be small and independent of the dynamic "flattening" of the satellite. The resulting problem is solved by the so-called small-parameter method. The differential equations turn out to be non-linear although for a limited interval of time they can be replaced by linear equations and deviations from the unperturbed motion can be determined. Comparison of the formulae now obtained for the above elements show that they differ appreciably from the classical formulae for a point satellite.

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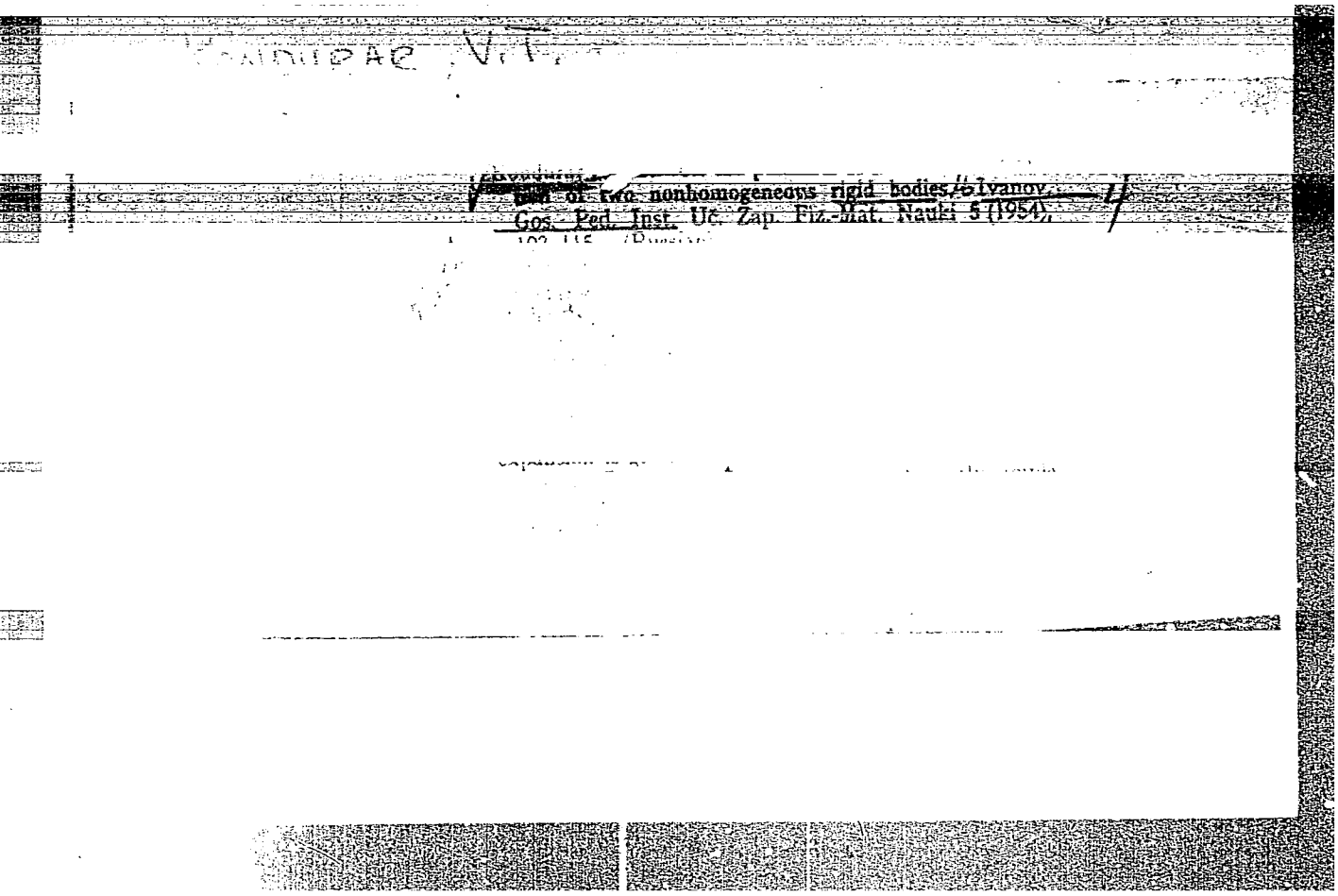
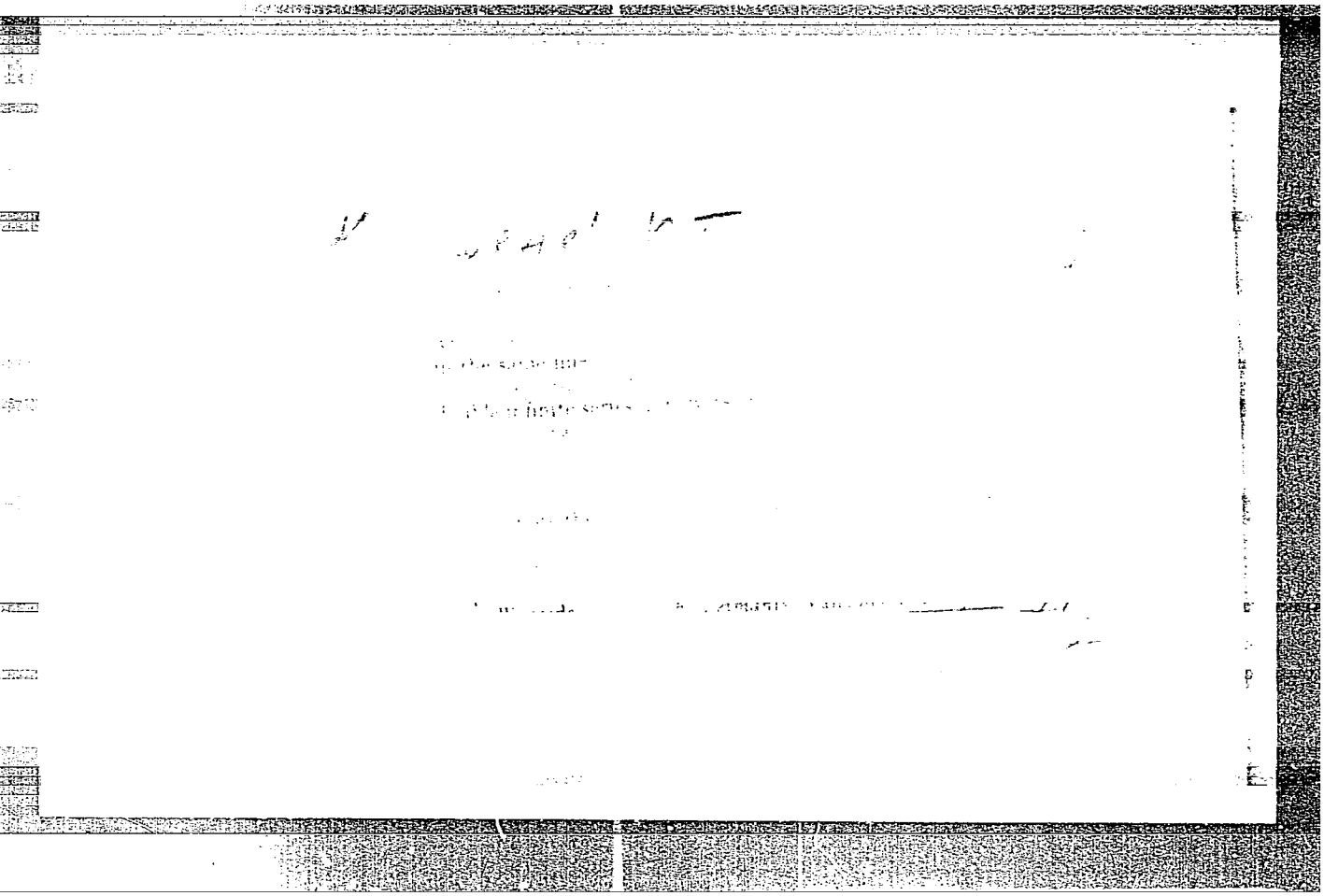
Card 3/3

KONDURAR', V.T.

Problem of the motion of two ellipsoids under mutual attraction. Part 3: Stability of circular motions in a problem of two ellipsoids with a common plane of symmetry. Trudy GAISH 21:115-134 '52. (MLRA 7:6)
(Orbits)



[illegible] of two nonhomogeneous rigid bodies. Ivanov.
Gos. Ped. Inst. Uc. Zap. Fiz.-Mat. Nauki 5 (1954).



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81827
SOV/124-59-10-11156

Translation from: Referativnyy zhurnal, Mekhanika, 1959, No. 10, p. 7, (USSR)

AUTHOR: Kondurar', V. T.

TITLE: The Two-Ellipsoid-Motion Under Effect of Mutual Gravitation. Part V. Periodic Solutions, Close to the Circular Ones in the Problem of Motion of Two Spheroids With Mutually-Perpendicular Rotation Axes

PERIODICAL: Tr. Gos. astron. in-ta im. Shternberga, 1954, Vol. 24, pp. 155-198. Parts I-IV see in: Astron. zh., 1936, Vol. 12, No. 6; Tr. Gos. astron. in-ta im. Shternberga, 1939, Vol. 9, No. 2; 1952, Vol. 21

TEXT: A certain special case of the problem of the translation-rotation motion of two bodies is discussed, to wit, the problem of the relative motion of a prolate spheroid B_2 under the gravitation effect from an oblate spheroid B_1 in case that their revolution axes remain mutually perpendicular during the entire time of motion. The feasibility of this motion of two ellipsoids, although it seems to be sufficiently probable mechanically, is not rigorously proved and also not considered in the work. The author represents the equations of the motion

Card 1/3

The Two-Ellipsoid-Motion Under Effect of Mutual Gravitation. Part V. Periodic Solutions, Close to the Circular Ones in the Problem of Motion of Two Spheroids With Mutually-Perpendicular Rotation Axes

problem in the shape:

$$\ddot{r} = r\dot{\vartheta}^2 + U_r', \quad \frac{d}{dt}(r^2\dot{\vartheta}) = -U_\psi', \quad I_2(\ddot{\psi} + \ddot{\vartheta}) = U_\psi'$$

where r is the distance between the B_1- and B_2-centers, ϑ is the longitude of the B_2-center, ψ is the angle between the direction of r and the direction of the B_2-revolution axis, and I_2 is the moment of inertia of B_2 relative to its revolution axis, U is the force function of gravitation, which is represented in the work by the expression developed as a multiple infinite series. The motion equations have the obvious integral $I_2\dot{\psi} + (I_2 + r^2)\dot{\vartheta} = c$, which reduces the equations to a system of fourth order with the unknowns r and ψ:

$$\frac{d}{dt}\left(\frac{\partial R}{\partial \dot{r}}\right) = \frac{\partial R}{\partial r}, \quad \frac{d}{dt}\left(\frac{\partial R}{\partial \dot{\psi}}\right) = \frac{\partial R}{\partial \psi}, \qquad (1)$$

where

$$R = K\left\{\frac{1}{2}(\dot{r}^2 + I_2\dot{\psi}^2) + U(r, \psi) - \frac{(c - I_2\dot{\psi})^2}{2(I_2 + r^2)}\right\},$$

and to a quadrature determining the cyclic variable ϑ. Equations (1) permit

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81827

SOV/124-59-10-11156

The Two-Ellipsoid-Motion Under Effect of Mutual Gravitation. Part V. Periodic Solutions, Close to the Circular Ones in the Problem of Motion of Two Spheroids With Mutually-Perpendicular Rotation Axes

a partial solution corresponding to the circular motion of the B_2-center around the B_1-center with the invariable B_2-orientation

$$r = r_0, \quad \psi = \psi_0 = \frac{i-1}{2}\pi, \quad i = 1, 2, 3, 4$$

Moreover, the author discusses the steadiness of the found partial solution in relation to the quantities

$$r, \dot{r}, \psi, \dot{\psi}.$$

Using the Lyapunov methods, the author shows that the partial solution is steady for $\psi_0 = 0^\circ, 180^\circ$, and unsteady for $\psi_0 = 90^\circ, 270^\circ$. Further, the author discusses the existence of periodic solutions close to the steady circular motion for $\psi_0 = 0$. The Lyapunov method permits the immediate detection of the existence of a periodic solution family with one arbitrary constant, close to the circular solution mentioned. The author establishes, as he has done by the Lyapunov method, periodic series, which represent these solutions and converge absolutely until the numerical value of the arbitrary constant exceeds a certain limit different from zero.

G. N. Duboshin

Card 3/3

KONDURAR, V. T.

"Problem of Motion of Two Ellipsoids Under Action of Mutual Attraction, Part V. Periodical Solutions Approximating Circular in the Problem of Two Spheroids With Mutually Perpendicular Axes"
Tr. Gos. astronom. in-ta P K Shternberga, 24, 155-198 - 1955

The motion of an oblate homogenous ellipsoid under action of a second immobile ellipsoid, their axes mutually perpendicular, is analyzed. Two cases of circular motion are established. In the first the rotational azis of the moving ellipsoid is directed along the radius-vector drawn from the center of the immobile ellipsoid in its equatorial plane, and in the second case the axis of the moving ellipsoid is perpendicular to this radius-vector. (RZhAstr, No 10, 1955)

SO: Sum-No 787, 12 Jan 56

KONDURAR', V.T.

Resolution of the function of reciprocal attraction force of two homogeneous ellipsoids. Uch. zap. Ivan. gos. ped. inst. 10:97-107 '56. (MLRA 10:4)

(Attractions of ellipsoids)

SOV/124-59-10-11155

Translation from: Referativnyy zhurnal, Mekhanika, 1959, No. 10, p. 7 (USSR)

AUTHOR: Kondurar', V. T.

TITLE: Some Topics of the Two-Body Problem

PERIODICAL: Sb. nauchn. tr. Ivanovsk. energ. in-ta, 1958, No. 8, pp. 452-479

TEXT: The author discusses the general problem of the translation-rotation motion of two absolutely solid bodies within which the elementary particles mutually attract according to the Newton law. The same problem, but in case of an arbitrary number of bodies, was discussed in the reviewer's article (Astron. zh., 1958, Vol. 35, No. 2, pp. 265-276 - RZhMekh, 1959, No. 5, 4686), but in coordinate representation. The author considers the two-body problem applying the vector representation in the motion equations. The motion equations are expressed for the different reference systems, the classic integrals are derived, and some simplest special cases are discussed.

G. N. Duboshin

Card 1/1

3(1)

AUTHOR: Kondurar', V.T.

SOV/33-35-5-10/20

TITLE: The Development of the Potential Function of the Mutual Attraction of Two Ellipsoids (Homogeneous and Non-Homogeneous) (Razlozheniye silovoy funktsii vzaimnogo prityazheniya dvukh ellipsoidov (odnorodnogo i neodnorodnogo))

PERIODICAL: Astronomicheskiy zhurnal, 1958, Vol 35, Nr 5, pp 763-771 (USSR)

ABSTRACT: In the present paper the author considers the problem of the mutual attraction of two ellipsoids arbitrarily situated relative to eachother, one being homogeneous and the other non-homogeneous. The mutual potential of the ellipsoids is developed in an infinite series according to the powers of the inverse distance between their centers; formulas for the coefficients are given. For an ellipsoidal distribution of densities the obtained formulas are very simple; the case of two homogeneous ellipsoids and also of two spheres is a special case of the author's investigations. Similar as G.N.Duboshin [Ref 3] the author uses developments of the studied function into a series of Gegenbauer polynomials. The obtained formulas can be applied in more general cases.
There are 5 Soviet references.

ASSOCIATION: Ivanovskiy energeticheskiy institut(Ivanovo Power Engineering Institute)

SUBMITTED: July 16, 1957

Card 1/1

83432

S/188/60/000/001/009/010
B019/B056

3.1400

AUTHOR: Kondurar', V. T.

TITLE: The Potential of Two Pieces of Material

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya 3, fizika, astronomiya, 1960, No. 1, pp. 83 - 85

TEXT: In the present paper, the attraction between two straight pieces of material is investigated. A formula for their reciprocal potential is derived assuming that both are homogeneous. The author sets up the force function (1) for the attraction between the two pieces, and integrates it by means of a suitable transformation. He attains formula (11) for the potential; it is noted that (11) is independent of the coordinates and may be used for the limiting case of the two-body problem. If the parameters are properly selected, (11) is the potential of two pieces in one plane or of two pieces parallel to each other. Equation (1):

$$U = k\int_{-l_0}^{+l_0} \ln\left\{(r_1 + r_2 + l)/(r_1 + r_2 - l)\right\} d\xi;$$

Card 1/2

KONDURAR!, V.T.

Problem of the motion of two ellipsoids under the action of mutual attraction. Soob.GAISH no.115:3-34 '60. (MIRA 14:3)
(Problem of two bodies)

20881
S/033/61/038/002/005/011
E032/E414

3,1420 (1041, 1080, 1109)

AUTHOR: Kondurar', V.T.

TITLE: A General Solution of the Problem of the Translational-Rotational Motion of a Spheroid in the Gravitational Field of a Sphere

PERIODICAL: Astronomicheskiy zhurnal, 1961, Vol.38, No.2, pp.310-324

TEXT: The present article is a continuation of previous work by this author published in Astron.Zh. Vol.36, No.5, 1959, and concerned with the motion of a spheroidal satellite. In the latter paper the author was concerned with the special solutions describing the simplest motions of the spheroid and these were designated as "regular". In the present paper, a general solution of the problem is given, assuming that the spheroid is uniform while the sphere has a spherical distribution of density. A general solution of the problem is given in the form of expansions in powers of the square of the eccentricity of the polar cross-section of the spheroid. The problem is formulated as follows. Consider two bodies, one a uniform sphere and the other a uniform elongated spheroid with semi-axes $a = b < c$. Let ε denote the eccentricity

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of the meridonial cross-section of the spheroid, m_0 and m the masses of the bodies and M the reduced mass. The position of the spheroid will be defined in the same relative set of coordinates which was used in Ref.1 except that the rectangular coordinates of the centre of inertia of the spheroid (ξ, η, ζ) are replaced by the cylindrical coordinates ρ, v, z. Moreover, let ψ and θ be the precession and nutation angles defining the orientation of the rotation axis of the spheroid relative to the fixed axes, and μ the mutual force function. The latter is a function of ρ, v, z, ψ and θ. A formula for this function was derived in Ref.1. Using this formula, the force function $U = Mu$ can be divided in two parts:

$$U = W(\rho, z) + V(\rho, z, v, \psi, \theta, \alpha), \qquad (1)$$

where где положено для сокращения

$$W = \frac{\mu}{r}, \quad r = \sqrt{\rho^2 + z^2}, \quad \mu = f(m_0 + m), \qquad (2)$$

$$V = \sum_1^\infty U_{2k}\alpha^k, \tag{3}$$

$$U_{2k} = 3\frac{\mu}{r}\frac{X_{2k}(\nu)}{(2k+1)(2k+3)}\left(\frac{c}{r}\right)^{2k}, \tag{4}$$

$$\nu = \frac{\rho}{r}\sin\theta\sin(\psi - v) + \frac{z}{\rho}\cos\theta \tag{5}$$

In these expressions f is the gravitational constant, ν is the cosine of the angle between the direction of the polar axis of the spheroid and the direction of the radius vector of its centre, $X_{2k}(\nu)$ are the Legendre polynomials of order $2k$, and $\alpha = \varepsilon^2$. Suppose that $A = B > C$ are the moments of inertia of the spheroid where $A = m(2 - \alpha)c^2/5$. Using the substitutions

$$\bar{V} = \frac{u}{\mu} = \sum_1^\infty \bar{U}_{2k}\alpha^k, \tag{6}$$

$$\bar{U}_{2k} = \frac{15}{(1+x)(2-\alpha)c^2}\frac{\mu}{r}\frac{X_{2k}(\nu)}{(2k+1)(2k+3)}\left(\frac{c}{r}\right)^{2k}, \tag{7}$$

Card 3/ 8 ~~elsewhere~~

$$x = \frac{m}{m_0}, \quad \frac{\mu}{1+x} = fm_0.$$

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A General Solution of ...

where $x = m/m_0$ and $\mu/(1 + x) = fm_0$, the basic equations of translational-rotational motion of the spheroid can be written down in the form

$$\frac{d^2\rho}{dt^2} - \rho\left(\frac{dv}{dt}\right)^2 = U'_\rho = W'_\rho(\rho, z) + V'_\rho(\rho, z, v, \psi, \theta, \alpha),$$

$$\frac{d^2z}{dt^2} = U'_z = W'_z(\rho, z) + V'_z(\rho, z, v, \psi, \theta, \alpha),$$

$$\frac{d}{dt}\left(\rho^2\frac{dv}{dt}\right) = U'_v = \bar{V}'_v(\rho, z, v, \psi, \theta, \alpha). \qquad (8)$$

$$\frac{d}{dt}(\sin^2\theta\cdot\dot{\psi} + e\cos\theta) = \bar{V}'_\psi(\rho, z, v, \psi, \theta, \alpha)$$

$$\ddot{\theta} - \cos\theta\sin\theta\cdot\dot{\psi}^2 + e\sin\theta\cdot\dot{\psi} = \bar{V}'_\theta(\rho, z, v, \psi, \theta, \alpha).$$

$$W'_\rho(\rho, z) = -\mu\frac{\rho}{r^3}, \quad W'_z(\rho, z) = -\mu\frac{z}{r^3}, \qquad (9)$$

$$e = \frac{c}{A}\bar{r}, \quad \bar{r} = \dot{\psi}\cos\theta + \dot{\varphi}, \quad \frac{C}{A} = 2\left(1 - \frac{1}{2-\alpha}\right), \qquad (10)$$

Card 4/8

successive determination of the coefficients of the series given by Eq.(14) (n-th order perturbations). It is shown that the coefficients in Eq.(14) are given by

$$\frac{d^2\rho_n}{dt^2} = p_{11}(t)\,\rho_n + p_{12}(t)\,z_n + R_n(t), \qquad (20)$$

$$\frac{d^2z_n}{dt^2} = p_{21}(t)\,\rho_n + p_{22}(t)\,z_n + Z_n(t),$$

$$\frac{d^2\theta_n}{dt^2} = p_{33}(t)\,\theta_n + \Theta_n(t), \qquad (21)$$

где коэффициенты

$$p_{11}(t) = W''_{\rho\rho}(\rho_0, z_0) - \frac{3c_0^2}{\rho_0^4}, \quad p_{12}(t) = W''_{\rho z}(\rho_0, z_0),$$

$$p_{21}(t) = W''_{z\rho}(\rho_0, z_0), \quad p_{22}(t) = W''_{zz}(\rho_0, z_0), \qquad (22)$$

$$p_{33}(t) = 3\dot{\psi}_0(c_1 - \dot{\psi}_0) + \dot{\theta}_0^2 - c_1^2 - e_0^2$$

и свободные члены

A General Solution of ...

$$R_n(t) = (R_n)_0 + \frac{2c_0}{\rho_0^3} V_n(t), \qquad \dot{Z}_n(t) = (\dot{Z}_n)_0$$

$$\theta_n(t) = (2\dot{\psi}_0 \cos\theta_0 - c_0)\sin^{-1}\theta_0 \cdot \Psi_n(t) + (\theta_n)_0, \tag{23}$$

причем

$$W''_{\rho\rho}(\rho_0, z_0) = \mu(3r_0^{-5}\rho_0^2 - r_0^{-3}),$$

$$W''_{zz}(\rho_0, z_0) = \mu(3r_0^{-5}z_0^2 - r_0^{-3}) \qquad (r_0 = \sqrt{\rho_0^2 + z_0^2}), \tag{24}$$

$$W''_{\rho z}(\rho_0, z_0) = 3\mu\, r_0^{-5}\rho_0 z_0.$$

and:

$$v_n(t) = -2c_0\int_{t_0}^{t}\frac{\rho_n}{\rho_0^3}dt + \int_{t_0}^{t}\frac{V_n(t)}{\rho_0^2}dt$$

$$\psi_n(t) = \int_{t_0}^{t}(c_0 - 2\dot{\psi}_0\cos\theta_0)\sin^{-1}\theta_0 \cdot \theta_n\, dt + \int_{t_0}^{t}\sin^{-2}\theta_0 \cdot \Psi_n(t)\, dt. \tag{25}$$

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S/033/61/038/002/005/011
E032/E414

A General Solution of ...

Eq.(20) to (25) represent the general solution of Eq.(8). This solution is then applied to two special cases. Examples are quoted showing the relative magnitude of first order perturbations in the coordinates of the centre of mass, and the Euler angles of the satellite, which are due to its oblateness. In some cases the perturbations are very appreciable (as a result of resonance phenomena). The paper is concluded with a consideration of the perturbation of the translational-rotational motion of the Moon which is due to its oblateness. There are 4 Soviet references.

SUBMITTED: February 26, 1960

Card 8/8

S/033/61/038/005/012/015
E032/E414

3, 9200

AUTHOR: Kondurar', V.T.

TITLE: On the translational-rotational motion of a satellite in the gravitational field of a planet and the Sun

PERIODICAL: Astronomicheskiy zhurnal, v.38, no.5, 1961, 969-981

TEXT: The present article is a continuation of an earlier work by the author (Ref.1: Astron. zh., v.38, 310, 1961). The present paper is concerned with the derivation of new formulas for the perturbations of the translational-rotational motion of a spheroidal satellite in the gravitational field of a spheroidal Earth and a point Sun. These formulas describe the nearly regular motion of the satellite and go over into the well-known classical first-approximation formulas describing the perturbation of the translational motion of a spherical satellite. The problem is treated as a degenerate, restricted Hill's problem of three bodies in which the Sun recedes to infinity but continues to influence the motion of the satellite. The formulas for the perturbations in the radius vector, the applicate and the longitude of the centre of mass, and for the perturbations in the precession and nutation angles of the satellite due to the Sun,

Card 1/2

KONDURAR', V.T.

Advancing-rotational motion of a satellite under the attraction of the planet and the sun. Astron.zhur. 38 no.5:969-981 S-O '61. (MIRA 14:9)

(Mechanics, Celestial)

36922
S/140/62/000/002/003/005
C111/C444

24.4100

AUTHOR: Kondurar', V. T.

TITLE: On a method for the expansion of the potential of a rigid body in terms of its moments of inertia of higher order

PERIODICAL: Vysshiye uchebnyye zavedeniya. Izvestiya. Matematika, no. 2, 1962, 82-86

TEXT: For the potential u of a rigid body M one proposes the series expansion

$$u = \frac{f}{r} \sum_{n=0}^{\infty} \frac{Y_n}{r^n} \qquad (5)$$

where

$$Y_n = \sum_{k=0}^{E\left(\frac{n}{2}\right)} a_{n,k} \sum_{\lambda_1+\lambda_2+\lambda_3=n-2k} \frac{(n-2k)!}{\lambda_1!\,\lambda_2!\,\lambda_3!} J^{2k}_{\lambda_1,\lambda_2,\lambda_3} \left(\frac{\xi}{r}\right)^{\lambda_1} \left(\frac{\eta}{r}\right)^{\lambda_2} \left(\frac{\zeta}{r}\right)^{\lambda_3}, \qquad (8)$$

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and

$$J^{2k}_{\lambda_1,\lambda_2,\lambda_3} = \int_{(M)} x^{\lambda_1} y^{\lambda_2} z^{\lambda_3} \varrho^{2k}\, dm . \qquad (9)$$

Here $P(\xi, \eta, \zeta)$ is the attracted point and $Q(x, y, z)$ is the attracting one, f is the gravitation constant

$$P_n(\mu) = \sum_{k=0}^{E\left(\frac{n}{2}\right)} a_{n,k}\, \mu^{n-2k} , \qquad (3)$$

$$a_{n,k} = \frac{(-1)^k}{2^n} C_n^k C_{2n-2k}^{n-2k}$$

and m is the mass of M. The integrals (9) can be expressed by linear combinations of the moments of inertia of higher order:

On a method for the expansion of the ...

$$J^{2k}_{\lambda_1,\lambda_2,\lambda_3} = \sum_{\mu_1+\mu_2+\mu_3=k} \frac{k!}{\mu_1!\,\mu_2!\,\mu_3!} J(\lambda_1+2\mu_1,\ \lambda_2+2\mu_2,\ \lambda_3+2\mu_3), \quad (10)$$

where

$$J(\lambda_1+2\mu_1,\ \lambda_2+2\mu_2,\ \lambda_3+2\mu_3) = \int_{(M)} x^{\lambda_1+2\mu_1} y^{\lambda_2+2\mu_2} z^{\lambda_3+2\mu_3}\, dm. \quad (11)$$

A number of special cases of these general formulas is considered (e. g. for the cases: M is homogeneous, M has an equatorial symmetric plane, M is plane etc.).

The author mentions G. N. Duboshin, Ostrogradskiy.

ASSOSIATION: Ivanovskiy energeticheskiy institut (Ivanov Energetic Institute)

SUBMITTED: May 10, 1959

Card 3/3

KONDURAR', V.T.

Perturbations of the translational and rotational motion of a satellite and a planet caused by their flattening. Astron.zhur. 39 no.3:516-526 My-Je '62. (MIRA 15:5)
(Planets) (Satellites) (Perturbation)

43548

S/033/62/039/006/021/024
E032/E514

3,2200

AUTHOR: Kondurar', V. T.

TITLE: On the presence of resonance phenomena in the motion of a satellite which are due to its shape and the form of its orbit

PERIODICAL: Astronomicheskiy zhurnal, v.39, no.6, 1962, 1112-1123

TEXT: This is a continuation of previous work reported in Astron. zh., 38, 310, 1961. The present paper is concerned with "more realistic problems", i.e. circular Keplerian orbits of the centre of mass are replaced by elliptical orbits. In particular, a detailed discussion is given of the rotational-translational motion of a satellite around a spherical planet for which the ellipsoid of inertia takes the form of a sphere. New analytical expressions are derived for the perturbations in the cylindrical coordinates of the centre of mass and the precession and nutation angles of the satellite, including effects associated with the flattening of the satellite and the particular form of its orbit. The analysis shows that these perturbations may be quite appreciable, which is not obvious a priori. These

Card 1/2 * S/033/61/038/002/005/011

KONDURAR', V.T.

One method for the expansion of the solid body potential into a series of its higher-order moments of inertia. Izv.vys.ucheb.zav.; mat. no.2:82-86 '62. (MIRA 15:8)

1. Ivanovskiy energeticheskiy institut.
(Potential, Theory of) (Field theory) (Attractions)

KONDURAR', V.T.

Presence of resonance phenomena in the motion of an artificial satellite resulting from its shape and the form of its orbit. Astron.zhur. 39 no.6:1112-1123 N-D '62. (MIRA 15:11)
(Artificial satellites)

L 20699-65 EWT(1)/EWP(m)/FS(v)-3/EWG(v)/T-2 Pc-4/Pe-5/Pq-4/Pg-4 AFWL/
ASD(a)-5/SSD/AFETR/RAEM(a)/ESD(dp) GW

S/0124/64/000/008/A006/A007

SOURCE: Ref. zh. Mekhanika, Abs. 8A40

[illegible] Kondurar', V.T.

[illegible] solutions for the equations describing the forward-rotational movement [illegible] with non-coinciding planes of symmetry

[illegible] Uch. zap. Ivanovsk. gos. ped. in-t, v. 31, 1963, 103-121

TOPICS: spheroid rotation, spheroid forward movement, Lyapunov theorem, precession, satellite movement, plane of symmetry, celestial mechanics, periodic solution

TRANSLATION: This article considers the movement of two non-uniform spheroids: a [illegible] spheroid - planet T_1 and an elongated spheroid - satellite T_2 in the event [illegible] T_2 during the entire time of the movement coincides with its own [illegible] are con- [illegible] symmetry, but not with the plane of sym[illegible] which are close to the stable circular solutions accompanied by the regular pre- [illegible] T_1 and T_2, the existence of which was demonstrated by the author on a previous occasion (Soobshch. Gos. astron. in-ta im. K.P. Shternberga, 1960, no. 115). By

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L 20699-65

ACCESSION NR: AR4047549

...linear equations ... coefficients ...

... and the characteristic equation ... Lyapunov theorem, the derived ... roots ...

... where ... coefficients h (k). The right-hand sides of the equations become holomorphic functions of C_i, after which the solution of the system is ... series of the arbitrary constant C_i with $h^{(k)}$ so selected that the coefficients of these series are defined as periodic functions of period 2π. M.S. Petrovskaya."

SUB CODE: AA, MA ENCL: 00

Card 2/2

KONDURAR', V.T.

Effect of the moon's shape on its motion. Astron.zhur. 40 no.4: 757-766 Jl-Ag '63. (MIRA 16:8)

1. Ivanovskiy energeticheskiy institut im. V.I.Lenina.
(Moon)

KONDUROV, I.A.; CHERNYAYEV, V.B.

Millisecond pulse meter. Prib. i tekh. eksp. no.1:54-58 Jl-Ag '56. (MLRA 10:2)

1. Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR.
(Electronic instruments)
(Pulse techniques (Electronics))

[redacted], A. M.; KONDUROV, I. A.; LOGINOV, Yu. Ye.

"Investigation of Cascade Transitions in the Reaction Sc^{45} (n,γ)Sc^{46}."

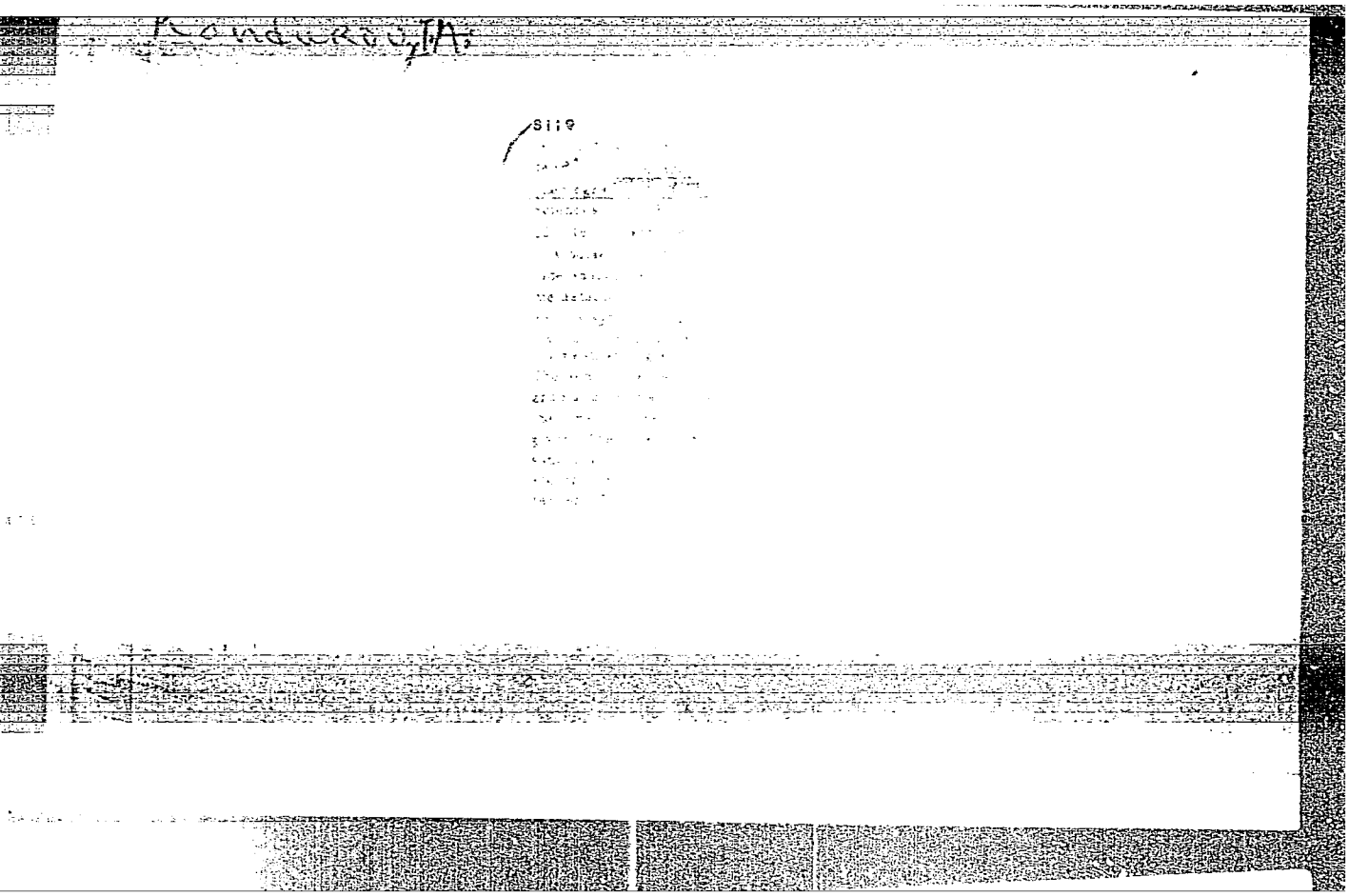
report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22 Feb 64.

FTI

BERESTOVOY, A.M.; KAMINKER, D.M.; KONDUROV, I.A.

Measuring the lifetime of the levels of Eu^{152}, Ag^{107}, and Cs^{134} nuclei engendered in (n γ) reactions. Zhur. eksp. i teor. fiz. 45 no.4:892-896 O '63. (MIRA 16:11)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR.



AP4042L/SOU/gs/ 1695/1700

Kostoyov, A.M.; Kondurov, I.A., Loginov, [illegible]

TITLE: Investigation of cascade transitions in the [illegible] of neutrons

Report, Fourteenth Annual Conference on Nuclear Spectroscopy held in Tbi-
lisi 14-22 Feb 1964

AN SSSR. Izv. Seriya fizicheskaya, v.28, no.10, 1964, 1695-1700

[illegible] nuclear physics, excited state, gamma emission, neutron capture, scan-
[illegible]

[illegible] coincidences were observed [illegible] accompanying
[illegible] emission, and a level scheme was [illegible] levels
[illegible] spectra, and
[illegible] for study

[illegible] thermal neutron
[illegible] of the AN SSSR. The det[illegible] neutron beam. Delays
[illegible] from the specimen at [illegible] spectrometer and a
[illegible] were determined with

L 14487-65
ACCESSION NR: AP4048640

5

pulse height analyzer. Delays from 10^{-3} to $1-^{-1}$ sec were determined by chopping the neutron beam. Longer delays were investigated with a pendulum conveyer that brought the specimen from the beam to the spectrometer. The γ-ray energies determined with [illegible] spectrometer were in satisfactory agreement with those measured [illegible] spectrometer by N. P. Fiebiger, N. C. [illegible] and [illegible] [illegible] results of (d, p) measurements [illegible] [illegible] diagram. Each γ-transition and level is discussed in some detail and the [illegible] shown in the [illegible]

[illegible] tables.

ENCL: 01

NR REF SOV: 002

OTHER: 007

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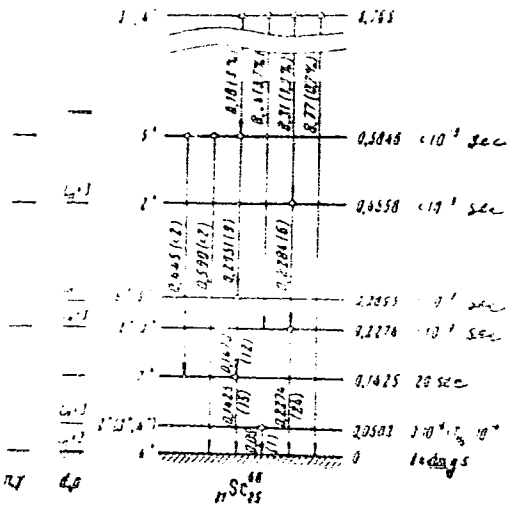
ENCLOSURE



Level diagram for Sc^{45}

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EWT(m) DIAAP/AFWL/SSD/ASD(gs)/ASD(t)
AP5048041 1701/1703

Krestovoy, A.M.; Kondurov, I.A.; Loginov, Yu.Ye.

Delayed transitions in Eu^{152} and Eu^{154} /Report, Fourteenth Annual Conference on Nuclear Spectroscopy held in Tashkent

SOURCE: AN SSSR, Izv. Seriy fizicheskaya, v.28, no.10, 1964, 1701-1703

TOPIC TAGS: nuclear physics, excited state, gamma emission, neutron capture, nuclear spectroscopy, europium

ABSTRACT: Delayed coincidences were observed between the soft and hard γ-rays produced by neutron capture in Eu^{151} and Eu^{153}. These nuclei were selected for study because they lie near the boundary between spherical and deformed nuclei. The [illegible] to the 1 cm diameter thermal [illegible] of the heavy water [illegible] Institute [illegible] were [illegible] coincidences. The soft γ-ray (40 kev) was observed from [illegible] and from Eu^{154}. These followed the hard γ-rays with delays that indicated lifetimes of 4×10^{-7}, 4×10^{-6} and 7×10^{-8}, respectively. The internal conversion coefficients

AP4043641

for these γ-transitions were determined by examining delayed γ-X coincidences. From the measured delays and internal conversion coefficients, it is concluded that the [illegible] due to an E1 transition, the [illegible] transition with a [illegible] nature of M2, and the 97 keV to an E2 transition. The 90 keV Eu^{152} γ-ray [illegible] previously been ascribed to an E2 transition (A.M.Berestovoy, B.M.Kaminker, I. [illegible] Komarov, Zhur.eksp.i teor.fiz.45,892,1963). "The authors express their gratitude [illegible] for his constant interest and to N.N.Chuprun[illegible] for assistance with [illegible]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: NP NR REF SOV: 002 OTHER: 004

2/2

KONDUROV, Igor' Andreyevich, inzh.; CHERNYAYEV, V.B., kand. tekhn. nauk; SHTEYNBOK, G.Yu., inzh., ved. red.; KORABLEV, L.N., inzh., red.; PONOMAREV, V.A., tekhn. red.

[128-Channel matrix-type amplitude analyzer]128-kanal'nyi matrichnyi amplitudnyi analizator. Moskva, Filial Vses.in-ta nauchn. i tekhn. informatsii, 1958. 10 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 41. No.P-58-40/2) (MIRA 16:2)

(Gamma rays--Measurement) (Gamma rays--Spectra)

BERESTOVOY, A.M.; KONDUROV, I.A.; LOGINOV, Yu.Ye.

Cascade transitions in the Sc^{45} (n,γ)Sc^{46} reaction. Izv. AN SSSR. Ser. fiz. 28 no.10:1695-1700 O '64.

Delayed transitions in Eu^{152} and Eu^{154}. Ibid.:1701-1703 (MIRA 17:12)

L 1862-66 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) DIAAP/IJP(c) JD/WW/JG/DM
ACCESSION NR: AP5022642 UR/0089/65/019/002/0188/0190
621.039.516.23

AUTHOR: Kondurov, I. A.; Gracheva, L. M.; Yegorov, A. I.; Kaminker, D. M.; Nikitin, A. M.; Petrov, Yu. V.

TITLE: Reactor burn-up cross section of Pm^{149} and samarium poisoning

SOURCE: Atomnaya energiya, v. 19, no. 2, 1965, 188-190

TOPIC TAGS: samarium, poison effect, nuclear reactor, nuclear technology, neutron capture, capture cross section

ABSTRACT: The authors measured the Pm^{149} burn-up cross section by determining the amount of Pm^{150} produced after Pm^{149} is exposed to a flux of thermal neutrons. This cross section is important because Pm^{149} burn-up determines the amount of samarium produced by promethium decay after reactor shutdown, and an excess of samarium can prevent restarting of the reactor. The radioactive Pm^{149} itself was obtained from their reaction Nd^{148} (n, γ) Nd^{149} → Pm^{149}. The separation of the promethium is briefly described. The radioactive Pm^{149} was exposed to a flux of

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ACCESSION NR: AP5022642

10^{14} neut/cm^2·sec in the water section of the VVR-M reactor. Measurement of the γ spectrum from the Pm^{149} shows the presence, besides the 285-keV peak due to Pm^{149}, of peaks at 340 and 410 kev with shorter half lives (2.7 h) belonging to Pm^{150} and a 103-kev line belonging to Sm^{153}. The cross section for the capture of thermal neutrons by Pm^{149} is determined from the value of the neutron flux and the ratio of the activities of Pm^{150} and Pm^{149}. The value obtained after correcting for the counting efficiency of the apparatus and other factors is 1700 ± 300 barns for neutrons with v = 2200 m/sec. This yields a samarium poisoning cross section of 74500 barns, as against a fuel fission cross section of 582 barns, for a 1.3% yield of promethium during fission. The correction necessary to apply the results to a fast-neutron reactor is briefly discussed. Orig. art. has 3 figures and 5 formulas. [02]

ASSOCIATION: None

SUBMITTED: 20Jul64 ENCL: 00 SUB CODE: NP

NO REF SOV: 002 OTHER: 006 ATD PRESS: 4112

Card 2/2 dg

L 41318-66 EWT(m)/EWP(t)/ETI IJP(c) JD/HW/JG

ACC NR: AP6019633 (A,N) SOURCE CODE: UR/0048/66/030/002/0359/0366

AUTHOR: Berestovoy,A.M.; Kondurov, I.A.; Loginov,Yu.Ye.

ORG: none

TITLE: Investigation with the aid of a Ge(Li) semiconductor detector of the soft gamma radiation of the odd-odd nuclei Sc-46, Mn-56, Co-60, As-76, Ag-108, Ag-110, In-116, and Cs-134 produced in neutron capture reactions /Report, Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure, held at Minsk, 25 January to 2 February 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 2, 1966, 359-366

TOPIC TAGS: gamma spectrum, gamma detector, semiconductor device, soft gamma rays, scandium, manganese, cobalt, arsenic, silver, indium, cesium

ABSTRACT: The authors have recorded the low energy (50 to 700 keV) γ-ray spectra of Sc^{46}, Mn^{56}, Co^{60}, As^{76}, Ag^{108}, Ag^{110}, In^{116}, and Cs^{134} produced in (n,γ) reactions on Sc^{45}, Mn^{55}, etc., by means of a 15 mm diameter 1 mm thick lithium drifted germanium detector of the type described elsewhere by O.A.Matveyev (Atomnaya energiya, 16, 362 (1964)). The detector was mounted near the bottom of a Dewar flask containing liquid nitrogen and shielded on the sides with a large block of lead. The detector was shielded from the target (mounted below the Dewar with 5 mm of lead. The target was

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ACC NR: AP6019633

irradiated with thermal neutrons filtered through 10 cm of lead in the care of the reactor and further moderated with 25 cm of quartz. Energy calibration was effected with the aid of monochromatic γ rays from Te^{123m} and Cs^{137}, and with γ rays from Hf^{181}. The spectra were recorded with a 256-channel pulse height analyzer. The eight spectra are presented graphically, compared with the findings of other investigators and discussed. The present findings were mostly in agreement with those of other authors. In many cases improved energy evaluations were obtained, owing to the high energy resolution of the semiconductor detector as compared with the scintillators frequently employed for soft γ-ray measurements. Two new lines (at 159 and 257 keV) were found in the Co^{60} spectrum, and a number of new lines were found in the Cs^{134} spectrum. The As^{76} spectrum was not in agreement with the findings of V. Cojocaru, D.Dorcioman, D.Dragomirescu and M.Cristu (Rev. Phys. Buoresti, 5, 211 (1960)). The authors thank D.M.Kaminker for support and valuable discussions, and L.V.Maslova, O.A.Matveyev, and N.B.Strokan for preparing the semiconductor counter. Orig. art. has: 7 figures and 2 tables.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 009 OTH REF: 006

Card 2/2

L 41329-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6019606 (A,N) SOURCE CODE: UR/0048/66/030/002/0209/0213

AUTHOR: Berestovoy, A.M.; Kondurov, I.A.; Loginov, Yu.Ye.

ORG: none

TITLE: Delayed gamma transitions in Re-186 and Re-188 induced in neutron capture reactions /Report, Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure, held at Minsk, 25 Jan. to 2 Feb. 1965/

SOURCE: AN SSSR, Izvestiya, Seriya fizicheskaya, v. 30, no. 2, 1966, 209-213

TOPIC TAGS: nuclear spectroscopy, nuclear structure, rhenium, gamma spectrum, gamma transition, half life

ABSTRACT: Delayed gamma transitions have been investigated and lifetimes of excited states have been measured in Re^{186} and Re^{188}. Small (50 mg) samples of metallic rhenium enriched in Re^{185} or Re^{187} were irradiated in the collimated thermal neutron beam from the water-moderated reactor of the Physicotechnical Institute of the USSR Academy of Sciences. The gamma rays from the irradiated samples were detected with two NaI: Tl scintillators connected into a fast-slow coincidence circuit. Half-lives were measured with the aid of a time-to-pulse height converter. Five lines ranging in energy from 63 to 255 keV were detected in the 12 nanosec delayed γ ray spectrum of Re^{188}. The half-life measured for this group of lines (of which the 63 keV line

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ACC NR: AP6019606

was by far the most intense) was 11.7 ± 1.2 nanosec. In the 10 nanosec delayed spectrum of Re^{188} there were detected four lines ranging in energy from 62 to 205 keV. The 205 keV line did not appear in the 20 nanosec delayed spectrum, and its half-life was found to be 4.6 ± 0.3 nanosec. The measured half-life of the longer lived group of Re^{188} states was 7.7 ± 0.6 nanosec. The nature of the observed states is discussed and a level diagram for Re^{188} is presented. The authors thank D.M. Kaminker for valuable advice and fruitful discussions. Orig. art. has: 1 formula, 4 figures and 2 tables.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 005 OTH REF: 007

Card 2/2

L 09387-67 EEC(k)-2/EWP(k)/EWT(d)/EWP(l)/EWP(v) IJP(c) GO/BB

ACC NR: AR6033766 SOURCE CODE: UR/0058/66/000/007/A028/A029

54

AUTHOR: Ivanov, M. N.; Kadashevich, V. I.; Kondurov, I. A.; Nekhay, A. P.; Nikolayev, S. N.; Nikanorov, A. G.; Petrova, V. I.

TITLE: Centralized system for the assembly and processing of information 14

SOURCE: Ref. zh. Fizika, Abs. 7A254 16

REF SOURCE: Tr. t-y nauchno-tekhn. konferentsii po yadern. radioelektron. T. 3. Ch. 1. M., Atomizdat, 1965, 110-136

TOPIC TAGS: memory core, computer storage device, logic element, information assembly, information processing

ABSTRACT: The operational principle and basic equipment of a centralized system for the assembly and processing of information are described in detail. The system consists of a memory core device, a control device, several input arrangements, an output arrangement and extension testing panels. The technical characteristics of the system are as follows: 2048 channels; channel volume, 2^{16}; there are 8 input devices; interrogation period, 5 μ sec; registration time of the number,

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L 09387-67
ACC NR: AR6033766

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82 μ sec; maximum registration frequency, 12,000 pulses/sec; data output speed with digital printout, 20 lines per sec; and the output speed on the perforator, 20 octal signs per second. The possibility of multi-dimensional measurements is foreseen. The design is of block type, with easily interchangeable parts. Logic elements are made with semiconductor devices. [Translation of abstract]

SUB CODE: 09, 12/

Card 2/2 mla

ACC NR: AR6035374 SOURCE CODE: UR/0271/66/000/009/B040/B041

AUTHOR: Ivanov, M. N.; Kadashevich, V. I.; Kondurov, I. A.; Nekhay, A. P.; Nikolayev, S. N.; Nikanorov, A. G.; Petrova, V. I.

TITLE: Central system for gathering and processing information (SOFI)

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 9B320

REF SOURCE: Tr. 6-y nauchno-tekhn. konferentsii po yadern. radioelektron. T. 3. Ch. I. M., Atomizdat, 1965, 110-136

TOPIC TAGS: computer design, information processing, information storage and retrieval, electronic computer, computer input unit, computer output unit, computer storage device/ Minsk-1 computer

ABSTRACT: The article describes a system developed at the Physicotechnical Institute im. A. F. Ioffe AN SSSR for time analysis in 500 - 1000 channels in the investigation of neutron spectra, for two-dimensional amplitude-time and amplitude-amplitude analysis, and for pulse-height analysis with 100 - 200 channels. The main units of the system are: the input units (amplitude and time analyzers) which transform the information received by them into a digital code that determines the address of the memory cell; the memory unit (magnetic operative memory of the "Minsk-1") for storage of the codes; the control unit, which scans the input units in sequence and extracts the numbers from the memory; output unit for the readout of the numbers from the memory to the printer unit, perforator, or cathode ray tube screen; movable control desk for remote control of the input blocks. The input plocks of the system can oper-

Card 1/2 UDC: 681.142.4

ACC NR: AR6035374

ate independently in the following modes: operation, observation, verification, and erasure. The technical characteristics of the system are as follows: number of channels 2048; channel capacity 2^{18}; number of input units 8; inquiry period 5 μsec; and maximum registration frequency 12 000 pulses/sec. 10 illustrations. Bibliography, 11 titles. V. Zh. [Translation of abstract]

SUB CODE: 09

Card 2/2

ACC NR: AP7001944 SOURCE CODE: UR/0120/66/000/006/0108/0113

AUTHOR: Ivanov, M. N.; Kadashevich, V. I.; Kondurov, I. A.

ORG: Physicotechnical Institute, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR, Leningrad)

TITLE: Multi-input counting system with data readout

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 108-113

TOPIC TAGS: calculator, data readout

ABSTRACT: The MSS-8 multi-input counting system is described. This self-contained system, based on decade-by-decade access to the storage unit, permits: 1) accumulation of information in eight channels simultaneously over a period preset by a timer; (2) information readout for printing and punching in machine-readable code; (3) revision of operating conditions according to the prescribed program. The basic parameters of the system are as follows: capacity of each channel 10^7; input resolution time, 1 μsec; intervals set by the timer 10^2—10^6 sec; A program control unit has been added to hold the system automatically to a prescribed sequence of system operations; there are up to 10^5 positions for program control. High reliability and simplicity of adjustment have been achieved by using linear access selection with full current remagnetization of cores. The storage unit contains 64 memory decades which form 8 channels. One of the eight decades keeps the number of channel and the

 UDC: 681.142.4

ACC NR: AP7001944

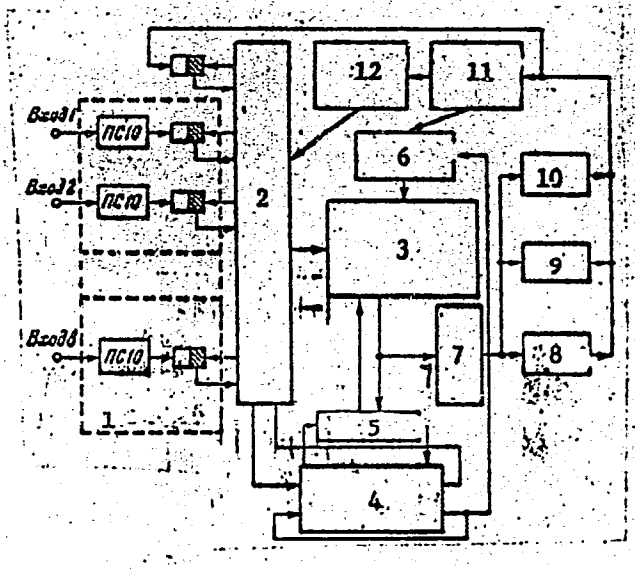

Fig. 1. Block diagram of MSS-8 multi-input counting system

1 - Input block; 2 - interrogator; 3 - storage unit; 4 - unit of prefixed programs: accumulation and output; 5 - four-bit adder; 6 - bit counter; 7 - output register; 8 - EUM-28-type printer; 9 - PL-type-puncher; 10 - indicating tube; 11 - output bit counter; 12 - output channel counter.

remaining serve for date storage. The code is stored in binary-decimal form. Orig. art. has: 6 figures.

SUB CODE: 09/ SUBM DATE: 20Nov65/ ORIG REF: 003/ OTH REF: 001/

Card 2/2

KONDURUSHKIN, I.A.

Optimum temperature for the vernalization of winter crops. Bot. zhur. 49 no.1:117-119 Ja '64. (MIRA 17:2)

1. Polyarnaya opytnaya stantsiya Vsesoyuznogo instituta rasteniyevodstva, Murmanskaya oblast'.

KONDURUSHKIN, I.A.

Effect of the conditions prevailing in the Far North on the phasic development of winter rye. Agrobiologiia no.3:398-401 My-Je '63. (MIRA 16:7)

1. Polyarnaya opytnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta rasteniyevodstva, Murmanskaya oblast'.
(Russia, Northern--Rye)

KONDURUSHKIN, I.A.

Converting winter rape into spring rape. Agrobiologiia no.6: 806-809 N-D '61. (MIRA 15:2)

1. Polyarnaya opytnaya stantsiya Vsesoyuznogo instituta rasteniyevodsta, Murmanskaya oblast'.
(Rape (Plant))

KONDYBIN, I.S.; VERSHINKIN, V.M.

Mine No.15 is an enterprise of communist labor. Ugol' 37 no.5:4-5 My '62. (MIRA 15:6)

1. Shakhta No.15, Krasnoyarskiy sovnarkhoz.
(Tunguska Basin--Coal mines and mining)

ACC NR: AP6034092 (A) SOURCE CODE: UR/0089/66/021/004/0262/0266

AUTHOR: Yampol'skiy, P. A.; Kokovikhin, V. F.; Golubkov, A. I.; Kondurushkin, N. A.; Bolyatko, A. V.

ORG: none

TITLE: Passage of neutrons through air

SOURCE: Atomnaya energiya, v. 21, no. 4, 1966, 262-266

TOPIC TAGS: neutron radiation, radiation hazard, air, neutron interaction, neutron energy distribution, radiation dosimetry

ABSTRACT: With an aim at reducing the radiation hazard to persons operating close to neutron sources, the authors present a Monte-Carlo calculation of the neutrons from monoenergetic point-like isotropic sources in an unbounded homogeneous medium of known density. The initial neutron energies considered are 0.001, 0.025, 0.2, 0.8, 2, 5, 10, and 14 Mev. The calculation was made with an M-20 electronic computer. From 7000 to 20 000 neutron histories were traced from the specified initial energy down to 0.2 ev. All possible neutron interactions with the nitrogen and oxygen atoms in air, contributing not less than 3% to the total neutron cross section, were taken into consideration, and other impurities in the air were disregarded. The space-energy and time distributions of the neutrons are obtained for distances 10 - 1300 m from the source and are presented in the form of numerous plots. Plots are also presented of the average time necessary for the neutrons to reach a given distance for different

Card 1/2 UDC: 539.125.52

ACC NR: AP6034092

initial neutron energies, and the flux of neutrons with energies larger than 0.2 Mev in air from point sources of various energies, and the neutron dose from a point source in air. The calculated neutron dose is compared with the experimental data obtained by the authors and by others, and agree within 25%. The authors thank O. I. Leypunskiy for useful discussions. Orig. art. has: 12 figures.

SUB CODE: 18/ SUBM DATE: 18May66/ ORIG REF: 005/ OTH REF: 004

Card 2/2

KONDYSKO, N. NI.

Tobacco

How I managed to obtain high tobacco yields. Tabak 14, No. 1, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

YEMEL'YANOV, V.P.; SKROBOV, V.; KONDYBKO, P.; ILYUKOVICH, B.M.; MERKUR'YEV, S.Ye.; SARAPULOV, Yu.V.

In the country's rolling mills. Metallurg 9 no.12:34-35 D '64. (MIRA 18:2)

1. Magnitogorskiy metallurgicheskiy kombinat (for Yemel'yanov). 2. Zavod "Krasnaya Etna" (for Skrobov, Kondybko). 3. Chusovskoy metallurgicheskiy zavod (for Ilyukovich, Merkur'yev). 4. Cherepovetskiy metallurgicheskiy zavod (for Sarapulov).

KONDYLEVA, T.S.

Effect of preliminary intervarietal hybridization on the crossing of durum and soft wheat. Vestsi AN BSSR Ser. biial. nav. no.3: 65-73 '64 (MIRA 18:1)

KONDZON, A. K.

Viticulture

Collective of the State Farm "Dzhemete" fulfilled its plans. Vin. SSSR 12, No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.